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BULLYING AND SUICIDAL BEHAVIOR IN JAILS

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Relationships between bullying features and suicidal behavior of inmates were examined. The files of 95 suicide victims in jails and prisons in the Netherlands were examined for reports of bullying. In addition, 221 nonsuicidal jail inmates and 53 suicidal jail inmates were interviewed. The files of 34% of the suicide victims noted that the suicide victim had felt bullied. Bullying, especially serious bullying, was relatively often reported by suicidal inmates and by vulnerable inmates. Different types of bullies were associated with different forms of bullying and different degrees of suicide risk. Results suggest that bullying and suicide risk are related and that a distinction should be made between mild and serious features of bullying.

In many countries, suicide rates in jails and prisons for adult prisoners are several times higher than the suicide rate in the larger community (Backett, 1987; Blaauw, Schilder, & van de Lande, 1998; Davis & Muscat, 1993; Hayes, 1989; Liebling, 1992). Although precise figures are absent, suicide attempt rates also appear to be much higher in jails and prisons than in the larger community (Gibbs, 1978; Liebling, 1992; Toch, 1975). Many researchers hold the view that these high rates are the result of a complex interaction between the

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highly demanding penal environment and the vulnerability of large numbers of inmates (Blaauw, Kerkhof, & Vermunt, 1997; Liebling, 1992). This view seems plausible because imprisonment is stressful (Sykes, 1966; Toch, 1992) and disproportionate numbers of inmates have many of the characteristics that are associated with increased suicide risk in the community, such as current mental disorders (Andersen, Sestoft, Lillebaek, Gabrielsen, & Kramp, 1996; Birmingham, Mason, & Grubin, 1996; Brooke, Taylor, Gunn, & Maden, 1996; Smith, O'Neill, Tobin, Walshe, & Dooley, 1996; Teplin, 1990), negative mood states (Gibbs, 1987; Ostfeld, Kasl, D'Atri, & Fitzgerald, 1987; Zamble & Porporino, 1988), poor coping skills (Liebling, 1992; Toch, 1992), low self-esteem (Liebling, 1992), histories of psychiatric care (Gibbs, 1987; Guy, Platt, Zwerling, & Bullock, 1985), and histories of suicidal behavior (Anno, 1985; Hatty & Walker, 1986; Marcus & Alcabes, 1993).

Several authors (Livingston & Beck, 1997; Power & Spencer, 1987; Toch, 1975) have suggested a relationship between bullying and suicidal behavior. Bullying usually describes a broad range of aggressive behaviors that are persistent, unprovoked, intended to cause fear, harm, and distress, and involve some kind of power imbalance (Farrington, 1993). Various studies in environments less stressful than jails and prisons have convincingly demonstrated that bullying can have deleterious effects on victims, such as stress, decreased emotional well-being, depression, and psychological and physical complaints (Farrington, 1993; Leymann, 1991; Papaioannou & Sjöblom, 1992). It can be derived from these findings that even more deleterious consequences of bullying are possible in jails where many people barely survive the challenges of the environment. The additional stress caused by bullying may compound into a crisis situation in which people commit acts of self-destruction. For instance, inmates may become self-destructive because they believe that they have no other possibilities to escape from the stressful situation or that self-destructive acts are the only effective medium to obtain a transfer or aid (see also Toch, 1975). However, suicidal behavior may also be a precursor of bullying. Research has shown that especially first-time inmates (G. Beck, 1994, 1995; Connell & Farrington, 1996; Power, Dyson, & Wozniak, 1997), sex offenders (Brookes & Pratt, 1996;

Power et al., 1997), inmates who have a history of residence in a mental health facility or a history of suicide attempts (Toch, 1992), and inmates who are perceived to be weak, vulnerable, isolated, younger, or odd-looking (Brookes & Pratt, 1996; Ireland & Archer, 1996; Power et al., 1997) often become the victims of bullying. These findings indicate that vulnerable inmates are often selected as the targets of bullying. Knowing that many suicidal inmates are vulnerable and that suicidal gestures may serve as clear signals of vulnerability, suicidal inmates may be often selected as the targets of bullying practices.

Studies on suicide attempts in the prison system lend some support to the existence of a relationship between bullying and suicidal behavior. Toch (1975) discovered that 25% of a sample of 381 inmates who had committed acts of self-injury had mentioned fate avoidance—a stance stemming from a person's inability to survive current or impending social situations—as an important theme of their crisis. Liebling (1992) found that a sample of 50 young self-injurers reported significantly more moderate and serious difficulties with other inmates than did a comparison group of 50 young non-self-injuring prisoners (43% vs. 30% and 24% vs. 8%, respectively). In another study, Liebling (1993) studied 305 reports describing suicide attempts or acts of self-injury in 16 British prisons. She discovered that bullying and victimization were indicated as reasons for the incidents in 8% of the adult prisoner incidents and in 27% of the young prisoner incidents. Power and Spencer (1987) discovered that of a sample of 76 young Scottish prisoners placed on strict suicide observation, about half attributed their self-injurious behavior to anticipated friction with other inmates (in these cases, strict suicide observation provided a safeguard against such friction).

Studies on suicides lend further support for a relationship between bullying and suicidal behavior. Burtch and Ericson (1979) studied the recorded motives of 21 suicide victims in four Canadian maximum security prisons and found that fear of attack by other inmates was the suspected motive for suicide in 29% of the cases. White and Schimmel (1994) studied psychological autopsies of 43 suicides in the American federal prison system and discovered that inmate-related conflicts were cited as precipitating factors in 23% of the cases. Laishes (1997)

studied information on 66 suicides in federal institutions in Canada and noted that fears of, or problems with, other inmates were identified as a potential motivating factor in 24% of the cases.

Due to methodological reasons, the aforementioned studies do not provide solid evidence for a relationship between bullying and suicidal behavior. The majority of studies have looked at widely differing concepts, such as fate avoidance (Toch, 1975), difficulties with other inmates (Liebling, 1992), and inmate-related conflicts (White & Schimmel, 1994). These concepts may not have been identical to bullying (e.g., conflicts between two equally powerful inmates, single incidents) or may not have included nonaggressive aspects of bullying (e.g., taxing, rumor-spreading, name calling). The studies that have focused on the motives for suicides (Burtch & Ericson, 1979; Laishes, 1997; Power & Spencer, 1987; White & Schimmel, 1994) have struggled with the problem that bullying often remains undetected by staff (G. Beck, 1995; McGurk & McDougall, 1991), that incident registration procedures can be seriously impaired (Bulten, 1998; Dooley, 1990) and that in some cases, the bullying-like phenomenon may not have been perceived to be a motivating factor for suicide. Furthermore, the studies that have used samples of young suicide attempters (Liebling, 1992; Power & Spencer, 1987) have limited application value for adult populations, because institutions for adult offenders have different environments and correlates of suicidal behavior (Liebling, 1993). With the exception of one study among young offenders (Liebling, 1992), none of the studies have employed comparison samples. Finally, several studies have operationally defined attempted suicide as self-injury leading to hospitalization (Liebling, 1992, 1993) or have relied on the perceived lethal nature of self-injurious behavior (Power & Spencer, 1987). Such definitions are of limited utility because they include inmates who used a highly lethal method while actively having made preparations to survive the act, and they exclude inmates who used a nonlethal method while actively wanting to die (Livingston & Beck, 1997).

The major aim of the current study was to further investigate the relationship between bullying and suicidal behavior and to avoid the shortcomings of other studies. In particular, the present study addressed not only the distribution of bullying among adult inmates

who have committed suicide, but also the question whether adult jail inmates with a high suicide risk report more incidences of bullying than do adult jail inmates with a low suicide risk.

The second aim was to investigate the relationship between vulnerability and bullying. There is scarce information about the characteristics of victims of bullying because previous studies have been limited in the range of variables investigated or have relied on inmate descriptions of characteristics. The present study examined bullying in relation to the previously identified victim characteristics: first time in prison (G. Beck, 1994, 1995; Connell & Farrington, 1996; Power et al., 1997), sexual offender (Brookes & Pratt, 1996; Power et al., 1997), a history of residence in a mental health facility (Toch, 1992), and a history of suicide attempts (Toch, 1992). Furthermore, the present study examined bullying in relation to some characteristics that are known to be related to jail suicide and that may also indicate vulnerability to becoming a victim of bullying: gender (Toch, 1975), age (Brookes & Pratt, 1996; Ireland & Archer, 1996; Power et al., 1997; Toch, 1975), violent offense, abuse of multiple hard drugs (e.g., heroin, cocaine, LSD), time in prison, and incarceration in a special care division.

The present study explored the effect of making a distinction between serious features of bullying (consisting of fears for bodily harm or death) and less serious features of bullying (consisting of other features of bullying, such as rumor-spreading, taxing, and name-calling), based on the idea that the severity of bullying could be a factor in the occurrence of suicidal behavior. It was also considered important to examine the different types of bullies (inmates, correctional officers, people outside the institution) because it was believed that different types of bullies were likely to be associated with different gradations of bullying and thus different gradations of suicide risk. For instance, one can imagine that people with limited access to the target, in comparison with those with direct access to the target, may wish to employ more serious forms of bullying (e.g., death threats) to achieve some results. One can also imagine that victims of bullying feel less threatened by people from whom it is easier to escape (people outside the institution) than by people from whom it is more difficult (other inmates) or impossible (correctional officers) to escape.

METHOD

PARTICIPANTS

In the past decade, the Dutch prison system has grown to a total of 39 jails and prisons, and 10 institutions for mentally disordered offenders who have to be detained for treatment. In 1998, these institutions collectively detained an average daily population of approximately 15,000 inmates. Twenty-two institutions within the Dutch prison system had encountered one or more suicides in the research period. The sample of 95 suicide victims consisted of 89 men (94%); the average age at the time of death was 34.2 years ($SD = 11.2$ years). Of the 95 suicide victims, 73% completed suicide in a jail, 14% completed suicide in a prison, and 14% completed suicide while detained in an institution for mentally disordered offenders. Of the suicide victims, 41% were charged with a violent offense such as murder, manslaughter, rape, or serious assault. A total of 48% were imprisoned in a special division or special institution for mentally disordered inmates. A total of 66% had been imprisoned at least once before, 73% had a history of psychiatric care, and 46% had a history of multiple substance abuse including hard drugs (i.e., cocaine, heroin, LSD).

The participant group of 53 inmates with a high suicide risk and the comparison group of 221 inmates with a low suicide risk had equal distributions of men (94% and 92%, respectively), young inmates ($M = 32.7$ years, $SD = 9.2$ years and $M = 31.1$ years, $SD = 9.5$ years, respectively), inmates charged with a violent offense (15% and 20%, respectively), inmates who had been in jail for more than 6 weeks during the present incarceration (24% and 17%, respectively), inmates with a history of multiple hard drug abuse (28% and 21%, respectively), and inmates with previous incarcerations (49% and 59%, respectively). As was intended, the experimental group had much higher scores on the Scale for Suicidal Ideation ($M = 17.6$, $SD = 6.4$ vs. $M = 0$, $SD = 0$; $t(52) = 20.1$, $p < .001$) and the Suicidal Intent Scale ($M = 16.7$, $SD = 3.9$ vs. $M = 0.3$, $SD = 1.3$; $t(54) = 30.7$, $p < .001$). However, the experimental group also had a higher distribution of inmates who were charged with a sexual crime (23% vs. 9%; $\chi^2(1, N = 274) = 8.2$, $p < .01$), inmates who had a history of psychiatric care (74% vs. 15%; $\chi^2(1, N = 273) = 74.7$, $p < .001$) and inmates who were imprisoned in a

special care division for mentally disordered or vulnerable inmates (43% vs. 5%; $\chi^2(1, N = 274) = 57.5, p < .001$).

PROCEDURE

An extensive procedure was used to construct a sample of suicide victims. At almost all institutions, organizations, and divisions working with the Dutch prison system (the National Department of Criminal Investigation, the Laboratory of Forensic Pathology, the Central Department of Judicial Documentation, and Regional Forensic Psychiatric Services), registration systems were examined and interviews were held with representatives. The purpose of these examinations and interviews was to find occurrences of deaths in jails or prisons and information about the deceased and the circumstances of their deaths. Subsequently, institutional documentation systems were examined and interviews were held with correctional officials (psychologists, psychiatrists, medical doctors, nurses, correctional officers) in all penal institutions in which a death had occurred. A specially constructed checklist containing prestructured questions was used for the interviews and the examinations of the death investigation reports, medical files, autopsy reports, psychological evaluation reports, and criminal history reports. Deaths were included in the study when (a) the detainee died in the period from January 1987 to February 1998, (b) the detainee died while being administratively present in a penal institution (not necessarily physically present because this would exclude suicide victims who eventually died in a hospital), and (c) the researchers of the current study agreed with the National Department of Criminal Investigation, coroner, or correctional staff that the death was likely to be purposefully self-inflicted. Information was obtained on 95 inmates who had committed suicide in the research period, comprising 95% of all 100 suicides in the research period.

An experimental group (EG) of adult jail inmates with a high suicide risk was constructed by interviewing 78 suicidal inmates in 30 remand centers. All the psychologists in Dutch jails were requested to notify the researchers of the current study whenever they believed that an inmate in their institution was potentially suicidal. In total, 78 inmates were nominated as potentially suicidal and these inmates were interviewed by a trained clinical psychology student in a one

(inmate) to one (interviewer) situation. Confidentiality and anonymity were assured. To ensure an experimental group of inmates with a high suicide risk, only inmates whose questionnaires indicated the presence of high suicidal ideation (scores of 5 or higher on the Scale for Suicidal Ideation; A. Beck, Kovacks, & Weissman, 1979) and who had a serious prior suicide attempt (scores of 10 or higher on the Suicidal Intent Scale; A. Beck, Schuyler, & Herman, 1974) were included in the sample. This resulted in the exclusion of 32 inmates. Seven inmates from the comparison group were added to the experimental group because these inmates were considered suicidal by a correctional psychologist and their questionnaires indicated the presence of high suicidal ideation and a serious prior suicide attempt. These exclusions and inclusions resulted in an experimental group of 53 adult inmates with a high suicide risk.

A comparison group (CG) was constructed by asking 291 inmates in 10 remand centers to participate in the study (a large sample was chosen because this would provide information about the epidemiology of suicidal behavior in jails, which was needed for other purposes than those that are described in the current article). The participants of the comparison group were all randomly selected from the inmate lists in the institutions by using computer-generated random numbers. Of the 291 inmates, 251 (86%) inmates agreed to participate. Each inmate was interviewed by a trained clinical psychology student in a one-to-one situation. Confidentiality and anonymity were assured. To establish a comparison group of inmates with a low suicide risk, all inmates whose questionnaires indicated the possible presence of suicidal ideation (scores of 1 or higher on the Scale for Suicidal Ideation; A. Beck et al., 1979) or a serious prior suicide attempt (scores of 10 or higher on the Suicidal Intent Scale; A. Beck et al., 1974) were excluded from the sample. This resulted in the exclusion of seven inmates with suicidal ideation and a serious prior suicide attempt and to the exclusion of 19 inmates with either suicidal ideation ($n = 3$) or a serious prior suicide attempt ($n = 16$). In addition, four questionnaires were excluded from the sample because of missing data, which resulted in a comparison group of 221 adult inmates with a low suicide risk.

MEASUREMENTS

Bullying. As in the study of Power et al. (1997), respondents were not provided with a predetermined definition of bullying. All of the suicide victims' files were inspected for statements about bullying, threats, harassment, or teasing by people from within or outside the penal institution. Respondents of the comparison group and experimental group were asked to indicate whether they had felt bullied, threatened, harassed, or teased during their imprisonment either by people from within the penal institution (other inmates, correctional officers, or other correctional officials) or by people from outside the penal institution (victims of the crime, accomplices, acquaintances, acquaintances of the victims, others). The two questions were collapsed into one indicator of bullying. By means of intersubjective agreement among the authors of this report, bullying was categorized into two categories: serious bullying consisting of fear of bodily harm or death, and mild bullying consisting of fear of taxing (paying for services or protection), rumor-spreading, name-calling, and other features of bullying. The same procedure was applied to the files on the suicide victims. Because the two categorizations were mutually exclusive and simple, there was 100% agreement among the authors on the categorization.

Suicidal ideation. Previous research has identified suicidal ideation as a powerful predictor of suicide risk (A. Beck et al., 1973). In the present study, suicidal ideation was assessed using the Scale for Suicidal Ideation (A. Beck et al., 1979). The SSI measures the intensity, duration, and specificity of someone's plans and wishes to commit suicide. The SSI consists of 19 items, each item requiring scoring by the interviewer on a 3-point scale ranging from 0 (*ideation characteristic not present*) to 2 points (*ideation characteristic present*). Total scores can vary from 0 to 38 points. Suicidal ideation can be considered present when scores exceed a total score of four points on questions 1, 2, and 4 (wish to live, wish to die, and desire to make active suicide attempt) because such scores indicate a negative attitude toward life and a fairly positive attitude toward death and displaying suicidal behavior. In the present study, the reliability (coefficient alpha) of this scale was .77.

Suicidal intent. The seriousness of the most recent suicide attempt was measured with the use of the Suicidal Intent Scale (SIS; A. Beck et al., 1974). This scale measures objective circumstances of the attempt (e.g., isolation, precautions against discovery, presence of a suicide note) and the seriousness or intensity of the wish of a person to terminate his or her life. The SIS has been proven reliable and capable of distinguishing eventual suicide victims from nonsuicide victims (A. Beck, Steer, & Trexler, 1989). The scale consists of 15 items, with each item ranging from zero (*low seriousness*) to two points (*high seriousness*). The total score can range from zero to 30 points. Suicide attempts can be considered serious when scores exceed 10 points, because such scores indicate at least moderate seriousness on two thirds of the questions or high seriousness on one third of the questions. In the present study, the reliability (coefficient alpha) of this scale was .83.

RESULTS

BULLIED SUICIDE VICTIMS

Inspections of the suicide victims' files showed that in 32 cases (34%), the suicide victim had felt bullied prior to his or her death. In 21 cases (22%), the reported bullying was of a serious nature because the suicide victims had feared for their life (6%) or that of a family member (2%) or had feared bodily harm to themselves (12%) or to a family member (1%). In 12 cases (13%), the reported bullying was of a less serious nature because the suicide victims had complained about being called names (4%), being ridiculed (2%), being limited of activities unnecessarily (1%), having their property deliberately destroyed (2%), or a combination of these mild features of bullying (4%).

VICTIMS OF BULLYING

Chi-square analysis showed that the experimental group of inmates with a high suicide risk more often reported being victims of bullying than did the comparison group of nonsuicidal inmates (66% vs. 34%; $\chi^2(1, n = 274) = 24.0, p < .001; r_s = .30$). In addition (see Table 1), bul-

TABLE 1: Bullying, Serious Bullying, and Mild Bullying and Characteristics of 274 Inmates

<i>Characteristic</i>	<i>n</i>	<i>Bullying (%)</i>	<i>Serious Bullying (%)</i>	<i>Mild Bullying (%)</i>
Gender				
Male	253	37	18	25
Female	21	33	14	29
Age				
>30	136	41	22	27
<30	136	34	14	24
Offense				
Violent	52	50	29	33
Nonviolent	222	34*	16*	24
Offense				
Sexual	31	55	36	32
Nonsexual	243	35*	16*	25
Multiple hard drug abuse				
Yes	61	34	20	23
No	203	38	18	26
Previous imprisonments				
Yes	156	31	16	22
No	117	46*	20	30
Longer than 6 weeks in prison				
Yes	219	41	18	28
No	49	25*	18	14*
History of psychiatric care				
Yes	72	51	32	31
No	201	32*	13*	24
Suicide attempt before imprisonment				
Yes	52	58	38	30
No	182	33*	13*	25
Imprisoned in special care division				
Yes	34	59	44	27
No	240	34*	14*	25

NOTE: Percentages that share an asterisk (*) differ at $p < .05$ in a chi-square test with the percentages immediately above those percentages in the same column.

lying was reported significantly more often by inmates charged with a violent offense, $\chi^2(1, n = 274) = 4.6, p < .05$, inmates charged with a sexual offense, $\chi^2(1, n = 274) = 4.7, p < .05$, first-time inmates, $\chi^2(1, n = 273) = 7.0, p < .05$, inmates who had been in prison for more than 6 weeks, $\chi^2(1, n = 268) = 4.4, p < .05$, inmates with a history of psychiatric care, $\chi^2(1, n = 273) = 8.4, p < .005$, inmates who had dis-

TABLE 2: Summary of Logistic Regression Analysis Predicting Bullying

<i>Variable</i>	β	SE	<i>Odds Ratio</i>	<i>Wald Statistic</i>
Suicide risk	1.93	0.41	6.92	22.56**
Time in jail	1.22	0.45	3.38	7.34*
Violent offense	0.83	0.38	2.29	4.88*
Previous incarcerations	0.62	0.31	1.85	4.07*

NOTE: A Hosmer and Lemeshow Goodness-of-Fit Index showed that additional predictor variables of a larger model provided no better fit than the logistic model, $\chi^2(5, n = 227) = 3.29$, *NS*. Sensitivity = 0.38, specificity = 0.90, false-positive prediction = 0.30, false-negative prediction = 0.31.

* $p < .05$. ** $p < .01$.

played suicidal behavior before the present imprisonment, $\chi^2(1, n = 273) = 10.4$, $p < .005$, and inmates in special care divisions, $\chi^2(1, n = 274) = 7.8$, $p < .01$. However, bullying was not related to gender, age, or history of multiple hard drug abuse. These findings show that several, but not all vulnerability factors, were associated with bullying.

A step forward logistic regression analysis¹ with bullying (yes, no) as the criterion variable and with the related characteristics as predictor variables showed that bullying had the strongest relationship with suicide risk, followed by time in jail, violent offense and previous incarcerations, $\chi^2(4, n = 227)$, = 39.94, $p < .0001$ (see Table 2). Other predictor variables did not significantly explain additional variance. Thus, with suicide risk in the equation, no additional variance of bullying was explained by factors such as sexual offense, history of psychiatric care, prior suicide attempt, and imprisonment in a special care division.

VICTIMS OF SERIOUS FEATURES OF BULLYING

The experimental group of inmates with a high suicide risk more often reported being victims of serious features of bullying than did the comparison group of nonsuicidal inmates (42% vs. 12%; $\chi^2(1, n = 274) = 25.0$, $p < .001$), whereby the majority of both groups feared being killed (EG = 19%, CG = 5%) or molested (EG = 17%, CG = 7%). Also, some feared that one of their family members would be killed (EG = 4%, CG = 1%) or molested (EG = 2%, CG = 0%). In addition, several vulnerability factors were associated with serious bully-

TABLE 3: Summary of Logistic Regression Analysis Predicting Serious Features of Bullying

<i>Variable</i>	β	SE	<i>Odds Ratio</i>	<i>Wald Statistic</i>
Suicide risk	1.74	0.41	5.72	18.09**
Violent offense	1.51	0.44	4.53	11.94*
Sexual offense	1.17	0.51	3.23	5.38*

NOTE: A Hosmer and Lemeshow Goodness-of-Fit Index showed that additional predictor variables of a larger model provided no better fit than the logistic model, $\chi^2(3, N = 231) = 0.96$, *NS*. Sensitivity = 0.23, specificity = 0.97, false-positive prediction = 0.03, false-negative prediction = 0.15.

* $p < .05$. ** $p < .01$.

ing (see Table 1). Serious bullying was more often reported by violent offenders, $\chi^2(1, n = 274) = 5.1, p < .05$, sexual offenders, $\chi^2(1, n = 274) = 7.2, p < .05$, inmates with a history of psychiatric care, $\chi^2(1, n = 273) = 12.7, p < .005$, inmates who had displayed suicidal behavior before the present imprisonment, $\chi^2(1, n = 273) = 16.0, p < .001$, and inmates in special care divisions, $\chi^2(1, n = 274) = 17.9, p < .001$, but serious bullying was not related to gender, age, previous incarcerations, time in jail, or multiple hard drug abuse.

A step forward logistic regression analysis showed that suicide risk had the strongest relationship with serious bullying, followed by violent offense and sexual offense (see Table 3), $\chi^2(3, n = 231) = 32.78, p < .0001$, and that other predictors did not significantly explain additional variance. Thus, a history of psychiatric care, prior suicide attempt, and imprisonment in a special care division did not explain additional variance of serious bullying above suicide risk.

VICTIMS OF MILD FEATURES OF BULLYING

The experimental group of inmates with a high suicide risk more often reported being victims of mild features of bullying than did the comparison group of nonsuicidal inmates 38% vs. 22%; $\chi^2(1, n = 274) = 5.5, p < .05$. The majority of both groups reported unnecessary limitations (EG = 15%, CG = 13%), negative remarks (EG = 8%, CG = 4%), and name-calling (EG = 4%, CG = 2%) as the most common features of mild bullying. Mild bullying was not related to gender, age, previous incarcerations, type of offense, history of psychiatric care,

TABLE 4: Summary of Logistic Regression Analysis Predicting Mild Features of Bullying

<i>Variable</i>	β	SE	<i>Odds Ratio</i>	<i>Wald Statistic</i>
Suicide risk	0.88	0.34	2.41	6.82**
Time in jail	0.94	0.44	2.56	4.51*

NOTE: A Hosmer and Lemeshow Goodness-of-Fit Index showed that additional predictor variables of a larger model provided no better fit than the logistic model, $\chi^2(2, n = 266) = 0.58$, NS. Sensitivity = 0.26, specificity = 0.89, false-positive prediction = 0.74, false-negative prediction = 0.11.

* $p < .05$. ** $p < .01$.

display of suicidal behavior before the present imprisonment, multiple hard drug abuse, or division of imprisonment (see Table 1). However, inmates who had been in jail for more than 6 weeks during their present detention reported more mild bullying than did inmates who were in jail for a shorter period, $\chi^2(1, n = 268) = 4.0$, $p < .05$. Thus, only two inmate characteristics were found to be associated with mild bullying. A step forward logistic regression with suicide risk and time in jail as predictor variables showed that suicide risk had a stronger relationship with mild bullying than did time in jail (see Table 4), $\chi^2(2, n = 266) = 11.03$, $p < .005$.

BULLIES

Most of the bullied suicide victims had identified other inmates as their bullies. Also, a fairly large proportion had identified people outside the penal institution as their bullies (see Table 5). Conversely, suicidal inmates identified about equal numbers of correctional officers, people outside the penal institution, other inmates, and combinations of these people as their bullies. Nonsuicidal inmates predominantly identified correctional officers as their bullies, followed by other inmates. Thus, inmates with different degrees of suicide risk identified different types of people as their bullies.

Table 5 reveals that different types of bullies appear to be associated with different degrees of bullying seriousness. Other inmates and people outside the penal institution were identified as the main sources of serious bullying, but other inmates and correctional officers were identified as the main sources of mild bullying. Correctional officers

TABLE 5: Percentages of Bullied, Seriously Bullied, and Mildly Bullied Victims Identifying Certain Types of Bullies

<i>Type of Bully</i>	<i>Bullied Victims</i>			<i>Seriously Bullied Victims</i>			<i>Mildly Bullied Victims</i>		
	<i>Suic</i> n = 32	<i>EG</i> n = 35	<i>CG</i> n = 66	<i>Suic</i> n = 21	<i>EG</i> n = 22	<i>CG</i> n = 28	<i>Suic</i> n = 12	<i>EG</i> n = 20	<i>CG</i> n = 50
Other prisoners	54	23	26	56	27	40	56	20	22
Prison officers	8	26	43	—	5	—	33	60	72
People outside the institution	31	26	12	44	59	60	—	10	—
Combinations of types	8	26	18	—	9	—	11	10	6

NOTE: Suic = group of 95 suicide victims; EG = experimental group of 53 suicidal inmates; CG = comparison group of 221 nonsuicidal inmates; dash indicates 0%.

were rarely mentioned as the source of serious bullying and people outside the penal institution were rarely mentioned as the source of mild bullying.

Furthermore, Table 5 illustrates that suicide victims identified other inmates as the main source of both serious and mild bullying. Conversely, the other two groups identified people outside the penal institution as the main source of serious bullying and correctional officers as the main source of mild bullying. These findings indicate that different types of bullies are associated with different forms of bullying and different degrees of suicide risk.

DISCUSSION

In accordance with the expectations and previous findings (Liebling, 1992), the prevalence of bullying was found to be higher among inmates with a high suicide risk than among inmates with a low suicide risk. Also in accordance with previous findings (Burtch & Ericson, 1979; Laishes, 1997; White & Schimmel, 1994), many suicide victim's files contained references that the suicide victims had also been the victims of bullying. Hereby, the 34% is an underestimation of the actual percentage of bullied suicide victims because bullying often remains undetected by staff (G. Beck, 1995; McGurk & McDougall, 1991) and registration of incidents is often impaired in

jails (Bulten, 1998; Dooley, 1990). Thus, it can be concluded from the present study that there is a relationship between bullying and suicidal behavior.

In full accordance with previous findings (G. Beck, 1994, 1995; Brookes & Pratt, 1996; Connell & Farrington, 1996; Power et al., 1997; Toch, 1992), sex offenders, first-time inmates, inmates with a history of psychiatric care, and inmates with a history of suicide attempts were found to be overrepresented among the victims of bullying. In addition, an overrepresentation was found of inmates in special care divisions among victims of bullying. Special care divisions in Dutch jails predominantly house mentally ill inmates and inmates who are considered not able to cope in a regular division. All of these findings suggest that the prevalence of bullying is especially high among vulnerable inmates.

Serious bullying was found to have a stronger relationship to suicide risk than mild bullying, although both types of bullying were found to have a relationship with suicide risk. This finding is in accordance with the idea that the severity of bullying can influence the relationship with suicide risk. In addition, inmate characteristics associated with serious bullying were found to be different from inmate characteristics associated with mild bullying. Furthermore, fairly distinct types of bullies were found to be associated with serious bullying (i.e., other prisoners and people outside the institution) and mild bullying (i.e., correctional officers and other prisoners). These findings suggest that a distinction should be made between serious and mild features of bullying.

The present study found only two inmate characteristics to be associated with mild bullying: time in jail and suicide risk. The finding that inmates who had been imprisoned for more than 6 weeks often reported to being the victims of mild bullying probably reflects some regained courage to express dissatisfaction with the situation, because 71% of these bullied inmates reported name-calling and limiting activities by correctional officers. More important, suicide risk was the only vulnerability characteristic associated with mild bullying, which indicates that not all vulnerable inmates are selected as the targets of mild bullying. An explanation for the relationship between mild bullying and suicide risk may then be found in the knowledge that suicidal people tend to interpret relatively harmless events, or

even fictitious events, more catastrophically than do nonsuicidal people (for a discussion about dichotomous thinking of suicidal people, see Neuringer, 1961; Neuringer & Lettieri, 1971). Thus, some of the suicidal inmates may have perceived relatively harmless acts of others as somewhat threatening (see also Livingston, 1994). In addition, it is possible that even mildly threatening acts of others are sufficient to cause a crisis situation in which people commit acts of self-destruction.

The present study found several inmate characteristics to be associated with serious features of bullying. The results indicate that violent offenders often reported being the victims of serious bullying, which probably reflects fears of revenge because many (79%) feared people from outside the penal institution. However, of greater significance are the findings that inmates with vulnerability characteristics (sexual offense, history of psychiatric care, history of suicidal behavior, imprisonment in a special care division) often reported being victims of serious bullying. Knowing that many suicidal inmates have characteristics that indicate vulnerability, it is not surprising that a relationship also emerged between suicide risk and serious bullying. However, the present study does not answer the question of whether bullying precedes suicide risk or whether suicide risk precedes bullying. It is possible that vulnerable inmates in general and suicidal inmates in particular, are considered easy targets for bullying practices, although it is unlikely that bullies utilize only serious features of bullying. It is also possible that the stressful experience of bullying compounds an already stressful situation and that vulnerable inmates commit acts of self-harm because of their inability to cope with the situation. Finally, it is possible that vulnerable inmates, and suicidal inmates in particular, tend to interpret relatively harmless events as catastrophic and that they fear for their lives in situations in which less vulnerable inmates do not feel threatened.

Further research is required on the validity of the three explanations for the relationship between suicide risk and bullying. The present study relied on the inmates own perceptions about whether they were the victims of bullying, which does not make it possible to control for the influence of dichotomous thinking of suicidal (or otherwise vulnerable) inmates. Future research should therefore address actual bullying instead of self-perceived bullying. In addition, future research

should be longitudinal in nature because one can then gather information about the time order of events. Longitudinal studies are also needed to investigate the relationship between bullying and eventual suicide. A conservative definition was used in the present study to construct the experimental group of suicidal inmates but there is no evidence that a considerable proportion of these inmates will eventually commit suicide. Finally, future studies should pay attention to the seriousness of bullying and the types of bullies because the present study demonstrates that these features can play a role in the relationship between bullying and suicide risk.

There are several practical implications of relationships between vulnerability characteristics or suicide risk and bullying. First, a high prevalence rate of bullying can be expected in jails (G. Beck, 1995; Ireland & Archer, 1996; Power et al., 1997) but even higher prevalence rates can be expected in divisions or institutions with high proportions of suicidal inmates or otherwise vulnerable inmates. Second, correctional officials should realize that their behavior (remarks) and decisions (about limiting activities) may sometimes be perceived as acts of bullying. Third, correctional officials should realize that inmates may feel bullied by people who do not have direct access to these inmates. Furthermore, mental health care workers should be sensitive to the presence of suicide risk when dealing with inmates who claim to be the victims of bullying, whereby these mental health care workers should realize that such reports of bullying may reflect oversensitivity to mildly negative or even neutral events. In addition, mental health care workers should be sensitive to bullying practices when dealing with suicidal inmates. Finally, transfers to divisions in which inmates are more protected from other inmates, and therapy that addresses eventual oversensitivity, may be effective means to ameliorate suicide risk in some cases.

NOTE

1. Step forward logistic regression analyses were performed because inmates with a high suicide risk and inmates with a low suicide risk differed on a number of characteristics. These analyses allow a prediction of a discrete outcome such as bullying (yes, no) from a set of predictor vari-

ables that may be dichotomous. Logistic regression has no assumptions about the distributions of the predictor variables (Tabachnick & Fidell, 1996) and the sufficiently large samples allowed for these analyses.

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